

IN THE CLAIMS

A complete list of claims is presented below with amendments marked up:

Current Listing of Claims:

1. (Currently amended) A method comprising:

selecting a first portion of local node elements from a plurality of local node elements in a first node, wherein the plurality of local node elements are in an active state and are not enumerated;

de-activating a remaining portion of local node elements; and[[,]]

enumerating the plurality of local node elements in the first node with the selected first portion of local node elements substantially in parallel with local enumeration of local node elements in a second node.

2. (Original) The method of claim 1 wherein selecting the first portion includes selecting the portion which first accesses a device that is shared by the plurality of local node elements.

3. (Original) The method of claim 1 wherein selecting the first portion includes selecting the first portion of local node processor elements.

4. (Original) The method of claim 1 wherein de-activating the remaining portion includes putting the remaining portion into a hibernation state.

5. (Currently amended) The method of claim 1 further comprising disabling a link

interface between a local node and a larger system upon power up, wherein the larger system includes ~~multiple nodes~~ the first and second nodes and the link interface allows information to be communicated between the local node and components of the larger system.

6. (Currently amended) A [[The]] method of claim 1 comprising:

selecting a first portion of local node elements from a plurality of local node elements, wherein the plurality of local node elements are in an active state and are not enumerated;

de-activating a remaining portion of local node elements; and

enumerating the plurality of local node elements with the selected first portion of local node elements, wherein enumerating the plurality of local node elements further includes

determining if the plurality of local node elements are functional,

amputating the local node elements which are completely dysfunctional to disable the dysfunctional local node elements;

pruning the local node elements which are partially functional to disable only those parts of the partially functional local node elements which are dysfunctional and to enable those parts of the partially functional local node elements which are functional;
and,

compiling a list of enumeration results to list the local resources in the node and the functionality of the local resources.

7. (Original) The method of claim 1 further comprising:

monitoring the enumeration progress of the plurality of local node elements;

selecting a second portion of local node elements from the plurality of local node elements if there is an enumeration progress issue;

enumerating the plurality of local node elements with the second portion of local node elements if there is an enumeration progress issue.

8. (Original) The method of claim 2 wherein selecting the portion which first accesses a device that is shared includes selecting the portion which first reads from a shared register.

9. (Original) The method of claim 5 further comprising enabling the link interface after enumerating the local node.

10. (Currently amended) An apparatus comprising:

a node including, wherein the node is a plurality of local node elements, wherein the node is one of a plurality of nodes coupled to each other; and

a first local bootstrap element to enumerate the plurality of local node elements, wherein the first local bootstrap element is one of the plurality of local node elements, wherein enumeration of the plurality of local node elements is performed substantially simultaneously with enumeration of each of the plurality of nodes; and,

~~a shared local device to select which of the plurality of local node elements is the first local bootstrap element.~~

11. (Currently amended) The apparatus of claim 10 ~~wherein a node comprises a plurality of nodes and the nodes of the plurality of nodes include a first shared local device to select a first local bootstrap element and a first local bootstrap element to enumerate the plurality of local node elements~~ further comprising a shared local device to select which of the plurality of local node elements is the first local bootstrap element.
12. (Currently amended) The apparatus of claim ~~10~~ 11 wherein the shared local device is in a first logic state prior to the first access of the shared local device and is in a distinct second logic state substantially immediately after the first access to the shared local device.
13. (Currently amended) The apparatus of claim 10 further comprising a server management device coupled to each of the plurality of nodes, the server management device to monitor the progress of local node enumeration and to cause the selection of a second local bootstrap element from the plurality of local node elements and amputate the first local bootstrap element if the progress of local node enumeration does not meet a predetermined requirement.
14. (Currently amended) The apparatus method of claim ~~10~~ 11 wherein the local shared device is a register which has a first logic state prior to the first reading of the register by a local node element and a second logic state after the first reading of the register by a local node element.
15. (Canceled).

16. (Original) The apparatus of claim 13 wherein the predetermined requirement is a time limit.

17. (Currently amended) A computer-readable medium having stored thereon a sequence of instructions, the sequence of instructions including instructions which, when executed by a processor, causes the processor to perform:

selecting a first portion of local node elements from a plurality of local node elements in a first node, wherein the plurality of local node elements are in an active state and are not enumerated;

de-activating a remaining portion of local node elements; and,

enumerating the plurality of local node elements in the first node with the first portion substantially in parallel with local enumeration of local node elements in a second node.

18. (Original) The computer-readable medium of claim 17 further comprising instructions which, when executed by the processor, causes the processor to perform:

selecting the first portion as the portion which first accesses a device that is shared by the plurality of local node elements.

19. (Original) The computer-readable medium of claim 17 further comprising instructions which, when executed by the processor, causes the processor to perform:

enabling a link interface between a local node and a larger system, wherein the larger system includes multiple nodes and the link interface allows information to be

communicated between the local node and components of the larger system.

20. (Currently amended) An apparatus comprising:

a plurality of processor nodes wherein a processor node comprises a plurality of local elements;

a I/O bridge coupled to a plurality of I/O devices;

a switch to enable communication between the plurality of processor nodes and the plurality of I/O devices through the I/O bridge;

a plurality of node link interfaces to allow communications between the nodes and the switches, wherein the node link interfaces are disabled upon power up[.];

a plurality of first local bootstrap processors to enumerate the local elements of the processor nodes in the plurality of processor nodes, wherein the processor nodes include a first local bootstrap processor which is local to the nodes;

a plurality of local shared devices within the processor nodes to select the plurality of first local bootstrap processors, wherein the individual processor nodes include a local shared device which is local to the node;

a first global bootstrap processor to enumerate the components of the apparatus; and,

a global shared device accessible to the individual processor nodes to select the first global bootstrap processor, wherein the plurality of first local bootstrap processors enumerate the plurality of local processor node elements substantially simultaneously.

21. (Original) The apparatus of claim 20 wherein the global shared device is coupled to the switch.

22. (Original) The apparatus of claim 20 wherein the global shared device is coupled to the I/O bridge.
23. (Original) The apparatus of claim 20 further comprising at least one server management device to monitor the progress of individual node enumeration and to cause the selection of a second local bootstrap processor from the plurality of local node elements and amputate the first local bootstrap processor for any node of the plurality of nodes in which the node enumeration is not completed within a predetermined time frame.
24. (Original) The apparatus of claim 20 further comprising at least one server management device to monitor the progress of system component enumeration and to cause the selection of a second global bootstrap processor from the plurality of system components and amputate the first global bootstrap processor if system enumeration is not completed within a predetermined time frame.
25. (Original) The apparatus of claim 20 wherein the plurality of local shared devices and the global shared device independently have a first logic state prior to the first access to the shared device and a distinct second logic state substantially immediately after the first access to the shared device.
26. (Currently amended) The apparatus according to claim 20 wherein the plurality of first local bootstrap processors for the individual nodes of the plurality of nodes are

selected substantially simultaneously ~~and the plurality of first local bootstrap processors enumerate the plurality of local processor node elements substantially simultaneously.~~

27. (Original) The apparatus of claim 25 wherein the local shared devices and the global shared device are a register which has a first logic state of "0" prior to the first reading of the register by a processor element and a second logic state of not "0" substantially immediately after the first reading of the register by a processor element.

28. (Currently amended) A computer system comprising:

a first node;

a second node having

a plurality of processors[[:]],

a local memory device to store BIOS instructions and enumeration

results[[:]],

~~an interchip connection device to enable communication between devices~~

~~in the computer system;~~

a boot flag register to select a bootstrap processor[[:]],

a bootstrap processor to enumerate devices in the second node

substantially simultaneously with enumeration of devices in the first node ~~computer~~

~~system; and~~

a link interface to enable communication between the computer system and a switch.

29. (Original) The computer system of claim 28 wherein the link interface is disabled on power up and enabled after successful enumeration.
30. (Original) The computer system of claim 28 wherein the bootstrap processor is the first processor of the plurality of processors to read the boot flag register.